

**Recitation of the Claims:**

- Claim 1 (deleted)** A dumbbell comprising:  
an handle having an elongated central portion with opposite first and second ends,  
a first flange formed on the first end and a second flange formed on the second end,  
a first weight attached to the first flange, said first weight having a first recess, said first recess dimensioned and configured to receive the first flange, and  
a second weight attached to the second flange, said second weight having a second recess, said second recess dimensioned and configured to receive the second flange.
- Claim 2 (deleted)** The dumbbell of claim 1 wherein each flange has a peripheral edge and wherein each flange is attached to its respective weight by a plurality of bolts positioned along the peripheral edge.
- Claim 3 (deleted)** The dumbbell of claim 1 wherein each flange has an outward flat face and wherein each weight has an inner flat wall in the recess, the flat face of each flange abutting the flat wall of its respective weight.
- Claim 4 (deleted)** The dumbbell of claim 1 wherein each flange has an external rim extending peripherally around the flange and wherein each weight has an internal rim extending peripherally around the recess, the external rim of each flange abutting the internal rim of the flange's corresponding weight.
- Claim 5 (deleted)** The dumbbell of claim 2 wherein each flange has an external rim extending peripherally around the flange and wherein each weight has an

internal rim extending peripherally around the recess, the external rim of each flange abutting the internal rim of the flange's corresponding weight.

Claim 6 (deleted) The dumbbell of claim 5 wherein each flange has an outward flat face and wherein each weight has an inner flat surface in the recess, the flat face of each flange abutting the flat surface of its respective weight.

Claim 7 (deleted) The dumbbell of claim 6 wherein the central portion, flanges and weights each have a longitudinal axis and wherein they are all coaxially aligned.

Claim 8 (deleted) The dumbbell of claim 7 wherein the external rim of the flanges and the inner rim of the weights extend parallel to the longitudinal axis of the flanges and the weights, respectively.

Claim 9 (deleted) The dumbbell of claim 7 wherein the flat face of each flange and the flat surface of each weight is perpendicular to the longitudinal axis of the flanges and the weights, respectively.

Claim 10 (deleted) A dumbbell comprising:

an handle having a substantially cylindrical central portion having a longitudinal axis and opposite first and second ends,

opposite first and second flanges formed on the first and second ends of the handle, respectively, said flanges each extending perpendicularly from the central portion, each flange having a diameter, a thickness and a peripheral edge,

opposite first and second weights attached to the first and second flanges,

respectively, each weight having a recess, each said recess having a diameter and a depth corresponding to the diameter and the thickness of the respective flange, respectively, the flange being retained in the recess,

each flange being secured to its respective weight by a plurality of bolts positioned along the flange adjacent the flange's peripheral edge.

- Claim 11 (deleted) The dumbbell of claim 10 wherein each flange has an outward flat face and wherein each weight has an inner flat surface in the recess, the flat face of each flange abutting the flat surface of its respective weight.
- Claim 12 (deleted) The dumbbell of claim 10 wherein each flange has an external rim extending peripherally around the flange and wherein each weight has an internal rim extending peripherally around the recess, the external rim of each flange abutting the internal rim of the flange's corresponding weight.
- Claim 13 (deleted) The dumbbell of claim 11 wherein each flange has an external rim extending peripherally around the flange and wherein each weight has an internal rim extending peripherally around the recess, the external rim of each flange abutting the internal rim of the flange's corresponding weight.
- Claim 14 (deleted) The dumbbell of claim 13 wherein the central portion, flanges and weights each have a longitudinal axis and wherein they are all coaxially aligned.
- Claim 15 (deleted) The dumbbell of claim 14 wherein the external rim of the flanges and the inner rim of the weights extend parallel to the longitudinal axis of the flanges and the weights, respectively.

Claim 16 (deleted) The dumbbell of claim 14 wherein the flat face of each flange and the flat surface of each weight is perpendicular to the longitudinal axis of the flanges and the weights, respectively.

Claim 17 (deleted) The dumbbell of claim 15 wherein the flat face of each flange and the flat surface of each weight is perpendicular to the longitudinal axis of the flanges and the weights, respectively.

Claim 18 (deleted) A dumbbell comprising:

a handle having an substantially cylindrical central portion having opposite first and second ends,

opposite first and second flanges formed on the first and second ends of the handle, respectively, said flanges each extending perpendicularly from the central portion, each flange having a diameter, a thickness, an outwardly facing flat surface, a peripheral edge and a rim adjacent the peripheral edge,

opposite first and second weights attached to the first and second flanges, respectively, each weight having a recess, each said recess having a diameter, a depth, an inner flat surface, and an internal rim extending peripherally around the inner flat surface, the diameter and depth of the recesses corresponding to the diameter and the thickness of the respective flange,

each flange being retained in the recess of its corresponding weight with the outwardly facing flat surface of each flange abutting the inner flat surface of the corresponding weight and the rim of the flange abutting the internal rim of the corresponding weight.

each flange being secured to its respective weight by a plurality of bolts positioned along the flange adjacent the flange's peripheral edge.

Claim 19 (deleted) The dumbbell of claim 18 wherein the internal rim of the weights and the rim of the flanges are perpendicular to the inner flat surface of the weights and the outwardly facing flat surface of the flanges, respectively.

Claim 20 (deleted) The dumbbell of claim 19 wherein the flanges, weights and the central portion are all coaxially aligned.

Claim 21. (New) A dumbbell comprising:

a handle having an elongated central portion with opposite first and second ends, and a central axis;

a first flange formed on the first end and a second flange formed on the second end, the first and second flanges having first and second peripheral edges circumferentially surrounding the first and second flanges, respectively, the first and second peripheral edges being oriented substantially perpendicular to the first and second flanges, respectively, and substantially parallel to the central axis;

a first weight having a first recess dimensioned and configured to receive the first flange, said first recess having a first internal rim circumferentially surrounding the first recess, the first peripheral edge closely abutting the first internal rim when the first flange is fully inserted into the first recess, the first flange and the first recess being dimensioned and configured such that first weight is substantially supported by the first edge of the flange;

a second weight having a second recess dimensioned and configured to receive the second flange, said second recess having a second internal rim circumferentially surrounding the second recess, the second peripheral edge closely abutting the second internal rim when the second flange is fully inserted into the second recess, the second flange and the second recess being dimensioned and configured such that the second weight is substantially supported by the second edge of the flange;

the first and second flanges being bolted to the weights by a plurality of bolts passing perpendicularly through the flange and into the weights, the bolts being substantially parallel to the axis, the first and second flanges, the bolts and the first and second recesses being dimensioned and configured such that any shear forces created between the handle and the weights caused by dropping the dumbbell are primarily transmitted between the peripheral edges of the flanges and the internal rims of the weights rather than transversely through the bolts.

Claim 22 (new)      The dumbbell of claim 21 wherein each flange has an outward flat face and wherein each weight has an inner flat surface in the recess, the flat face of each flange abutting the flat surface of its respective weight.

Claim 23 (new)      The dumbbell of claim 22 wherein the flat surfaces of each weight has an annular groove extending circumferentially around the flat surface adjacent the internal rim.

Claim 24 (new)      A dumbbell comprising:  
  
a handle having an substantially cylindrical central portion having opposite first and second ends,  
  
opposite first and second flanges formed on the first and second ends of

the handle, respectively, said flanges each extending perpendicularly from the central portion, each flange having a diameter, a thickness, an outwardly facing flat surface, a peripheral edge and a rim adjacent the peripheral edge,

opposite first and second weights attached to the first and second flanges, respectively, each weight having a recess, each said recess having a diameter, a depth, an inner flat surface, and an internal rim extending peripherally around the inner flat surface, the diameter and depth of the recesses corresponding to the diameter and the thickness of the respective flange, the flat surface having an annular groove extending circumferentially around the flat surface adjacent the internal rim,

each flange being retained in the recess of its corresponding weight with the outwardly facing flat surface of each flange abutting the inner flat surface of the corresponding weight and the rim of the flange abutting the internal rim of the corresponding weight.

each flange being secured to its respective weight by a plurality of bolts positioned along the flange adjacent the flange's peripheral edge.